

Use Attainability Analysis

for

WBID 1195 Cahoonie Creek

Submitted by
SES, Inc.

To
Missouri Department of Natural Resources
Water Protection Program

Date Received: June 1, 2007

Field Data Sheets for Recreation Use Stream Surveys
Data Sheet A - Water Body Identification
(For water body being surveyed)

Water Body Information

Water Body Name:	Cahoonie Creek	WBID:	1195
8 digit HUC code:	10290110	County:	Dallas
Upstream Legal Description	36N 20W 9		
Downstream Legal Description	36N 20W 2		
Number of Sites Evaluated	3		
List all site numbers, listed upstream to downstream	1,2,3		

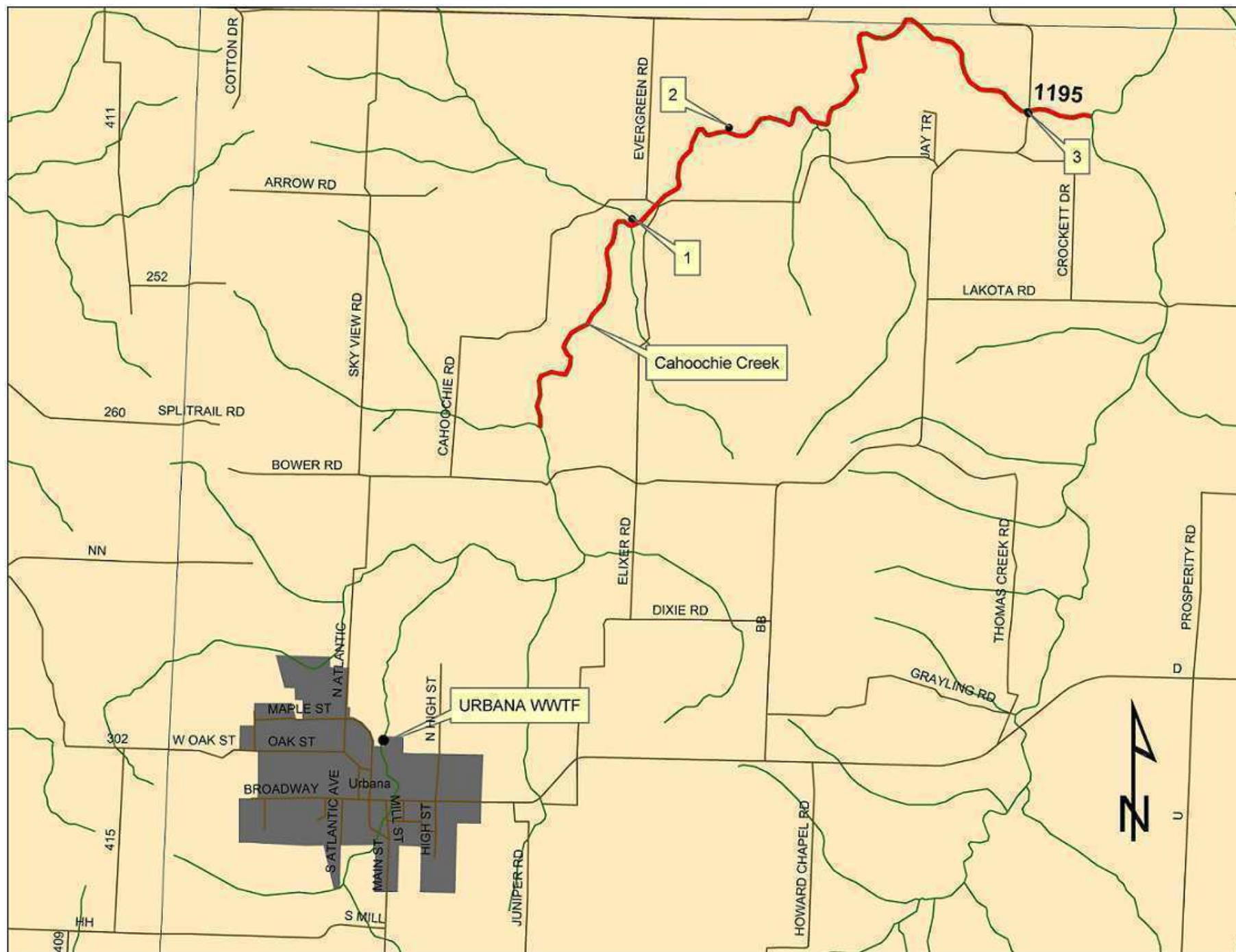
Discharger Facility Information

Discharger Facility Name(s):	Urbana WWTF
Discharger Permit Number(s):	MO0095176

UAA Surveyor

Name of Surveyor:	Nolan Pringle	Telephone Number:	(913) 307-0046
Organization/Employer:	SES, Inc.		
Position:	Field Team Leader		

Signed: _____ Date: _____



Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 1195
 Site # 1

Date and Time: 5/18/2007 15:15

Current Weather Conditions Suny, clear

Weather Conditions for Past 10 days: 1.72 inches rainfall

Drought Conditions? No

Site Location (e.g. road crossing) Upstream of Cahoonchie Rd. crossing

GPS Mark: 26

Upstream Photo 53 Downstream Photo 54

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	None of the Above	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	None of the Above

WBID # 1195 **Site #** 1
Mark # 26 **Dissolved Oxygen (ppm)** 12
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	27				
Run	9				
Pool	64				

Downstream View's Physical Dimensions: Is there any water present at this view?

If so, is there an obvious current?

Substrate:

30% Cobble	33% Gravel	0% Sand	30% Silt
0% Mud/Clay	7% Bedrock		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Brown surface algae, no drifting/floating algae, algae on rocks, and vegetation along banks

Water Characteristics

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other:Leaves
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 1

Mark # 26

Depth (m)		Depth (m)		Depth (m)	
Transect 1	0.05	Transect 5	0.15	Transect 9	0.10
Substrate:	0.05	Substrate:	0.20	Substrate:	0.20
Cobble,gravel, silt	0.05	Cobble,gravel, silt	0.20	Cobble, gravel, silt	0.25
Water Clarity:	0.05	Water Clarity:	0.25	Water Clarity:	0.30
Clear	0.05	Clear	0.20	clear	0.35
Channel Feature:	0.05	Channel Feature:	0.20	Channel Feature:	0.30
Riffle	0.10	Pool	0.10	pool	0.25
Channel Width:	0.10	Channel Width:	0.05	Channel Width:	0.35
16 yards	0.15	11 yards	0.05	11 yards	0.20
0.05	0.10	0.18	0.05	0.25	0.10
Transect 2	0.05	Transect 6	0.10	Transect 10	0.05
Substrate:	0.10	Substrate:	0.30	Substrate:	0.20
Cobble,gravel, silt	0.15	Bedrock, gravel	0.40	Silt, cobble, gravel	0.15
Water Clarity:	0.15	Water Clarity:	0.45	Water Clarity:	0.20
Clear	0.20	Clear	0.45	Clear	0.20
Channel Feature:	0.20	Channel Feature:	0.35	Channel Feature:	0.20
Pool	0.20	Pool	0.25	Pool	0.25
Channel Width:	0.25	Channel Width:	0.20	Channel Width:	0.35
11 yards	0.20	7 yards	0.20	11 yards	0.35
0.20	0.20	0.28	0.10	0.20	0.20
Transect 3	0.05	Transect 7	0.15	Transect 11	0.05
Substrate:	0.15	Substrate:	0.25	Substrate:	0.05
Cobble,gravel, silt	0.30	gravel,cobble, bedrock	0.30	Cobble, gravel	0.10
Water Clarity:	0.35	Water Clarity:	0.20	Water Clarity:	0.10
Clear	0.35	Clear	0.20	Clear	0.10
Channel Feature:	0.35	Channel Feature:	0.40	Channel Feature:	0.10
Pool	0.35	Pool	0.50	Riffle	0.10
Channel Width:	0.35	Channel Width:	0.50	Channel Width:	0.05
8 yards	0.35	10 yards	0.40	6 yards	0.05
0.35	0.35	0.28	0.20	0.08	0.05
Transect 4	0.05	Transect 8	0.10		
Substrate:	0.05	Substrate:	0.25	SITE MEDIAN	SITE MAXIMUM
Gravel, cobble	0.05	Cobble, gravel, silt	0.30	0.20	0.50
Water Clarity:	0.05	Water Clarity:	0.30		
Clear	0.05	Clear	0.40		
Channel Feature:	0.05	Channel Feature:	0.40		
Riffle	0.10	Run	0.50		
Channel Width:	0.20	Channel Width:	0.50		
4 yards	0.20	3 yds	0.40		
0.05	0.25	0.40	0.40		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 1195
 Site # 2

Date and Time: 5/18/2007 16:25

Current Weather Conditions

Weather Conditions for Past 10 days: 1.72 inches rainfall

Drought Conditions? No

Site Location (e.g. road crossing) 800 yards downstream of crossing

GPS Mark: 27

Upstream Photo 56 Downstream Photo 55

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	None of the Above	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	None of the Above

WBID # 1195 **Site #** 2
Mark # 27 **Dissolved Oxygen (ppm)** 11.5
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	20				
Run	0				
Pool	80				

Downstream View's Physical Dimensions: Is there any water present at this view?

If so, is there an obvious current?

Substrate:

20% Cobble	40% Gravel	0% Sand	40% Silt
0% Mud/Clay	0% Bedrock		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Water grasses, vegetation along banks, algae on rocks, no floating algae

Water Characteristics

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other : Leaves
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 2

Mark # 27

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.05	Transect 9	0.25
Substrate:	0.15	Substrate:	0.10	Substrate:	0.45
Silt, gravel	0.20	silt, gravel	0.20	Silt, gravel, cobble	0.50
Water Clarity:	0.30	Water Clarity:	0.30	Water Clarity:	0.50
clear	0.35	clear	0.40	clear	0.55
Channel Feature:	0.40	Channel Feature:	0.40	Channel Feature:	0.45
pool	0.40	pool	0.45	pool	0.35
Channel Width:	0.35	Channel Width:	0.45	Channel Width:	0.35
7 yards	0.15	12 yards	0.40	12 yards	0.30
0.25	0.10	0.40	0.40	0.40	0.30
Transect 2	0.10	Transect 6	0.20	Transect 10	0.15
Substrate:	0.15	Substrate:	0.25	Substrate:	0.30
Silt, gravel	0.30	cobble, gravel, silt	0.30	Silt, gravel, cobble	0.35
Water Clarity:	0.40	Water Clarity:	0.30	Water Clarity:	0.40
clear	0.45	clear	0.30	clear	0.40
Channel Feature:	0.50	Channel Feature:	0.35	Channel Feature:	0.50
pool	0.50	pool	0.25	pool	0.55
Channel Width:	0.40	Channel Width:	0.20	Channel Width:	0.60
10 yards	0.30	12 yards	0.20	12 yards	1.00
0.35	0.15	0.25	0.10	0.45	0.70
Transect 3	0.05	Transect 7	0.30	Transect 11	0.10
Substrate:	0.30	Substrate:	0.35	Substrate:	0.20
cobble, gravel, silt	0.40	cobble, gravel, silt	0.35	gravel, silt	0.30
Water Clarity:	0.55	Water Clarity:	0.35	Water Clarity:	0.35
clear	0.90	clear	0.35	clear	0.45
Channel Feature:	1.00	Channel Feature:	0.25	Channel Feature:	0.50
pool	1.00	pool	0.30	pool	0.50
Channel Width:	1.00	Channel Width:	0.30	Channel Width:	0.55
12 yards	0.70	5 yards	0.25	18 yards	0.40
0.63	0.55	0.30	0.30	0.38	0.30
Transect 4	0.30	Transect 8	0.20		
Substrate:	0.50	Substrate:	0.30	SITE MEDIAN	SITE MAXIMUM
Silt, gravel	0.80	cobble, gravel, silt	0.30	0.35	1.00
Water Clarity:	0.70	Water Clarity:	0.25		
clear	0.70	clear	0.25		
Channel Feature:	0.60	Channel Feature:	0.40		
pool	0.60	pool	0.40		
Channel Width:	0.60	Channel Width:	0.40		
10 yards	0.60	12 yards	0.25		
0.60	0.60	0.28	0.15		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 1195
 Site # 3

Date and Time: 5/18/2007 18:00

Current Weather Conditions Sunny, clear

Weather Conditions for Past 10 days: 1.72 inches precipitation

Drought Conditions? No

Site Location (e.g. road crossing) At road crossing

GPS Mark: 29

Upstream Photo 57 Downstream Photo 58

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	None of the Above	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	None of the Above

WBID # 1195 **Site #** 3
Mark # 29 **Dissolved Oxygen (ppm)** 10.3
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	18				
Run	9				
Pool	73				

Downstream View's Physical Dimensions: Is there any water present at this view?

If so, is there an obvious current?

Substrate:

30% Cobble	35% Gravel	0% Sand	35% Silt
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0% Mud/Clay	0% Bedrock
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Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Water grasses, grass along banks, filamentous green algae, little algae on rocks, no floating algae

Water Characteristics

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other : Leaves
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 3

Mark # 29

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.10	Transect 5	0.05	Transect 9	0.25
Substrate:	0.40	Substrate:	0.15	Substrate:	0.35
cobble, gravel	0.35	gravel, silt	0.15	cobble, gravel, silt	0.40
Water Clarity:	0.25	Water Clarity:	0.15	Water Clarity:	0.35
clear	0.15	clear	0.15	clear	0.30
Channel Feature:	0.10	Channel Feature:	0.15	Channel Feature:	0.30
riffle	0.40	pool	0.15	pool	0.30
Channel Width:	0.70	Channel Width:	0.10	Channel Width:	0.30
17 yds	0.80	9 yds	0.10	7 yds	0.35
0.38	0.60	0.15	0.10	0.33	0.35
Transect 2	0.15	Transect 6	0.15	Transect 10	0.10
Substrate:	0.20	Substrate:	0.10	Substrate:	0.20
gravel, silt	0.30	gravel, silt	0.15	cobble, gravel, silt	0.10
Water Clarity:	0.35	Water Clarity:	0.25	Water Clarity:	0.10
clear	0.30	clear	0.30	clear	0.15
Channel Feature:	0.25	Channel Feature:	0.30	Channel Feature:	0.15
pool	0.25	pool	0.30	pool	0.15
Channel Width:	0.25	Channel Width:	0.25	Channel Width:	0.15
6 yds	0.15	12 yds	0.25	11 yds	0.15
0.25	0.05	0.25	0.15	0.15	0.15
Transect 3	0.10	Transect 7	0.20	Transect 11	0.05
Substrate:	0.20	Substrate:	0.25	Substrate:	0.05
gravel, silt, cobble	0.30	gravel, silt	0.25	cobble, gravel, silt	0.10
Water Clarity:	0.30	Water Clarity:	0.25	Water Clarity:	0.15
clear	0.30	clear	0.15	clear	0.20
Channel Feature:	0.30	Channel Feature:	0.10	Channel Feature:	0.20
run	0.20	pool	0.10	riffle	0.20
Channel Width:	0.20	Channel Width:	0.10	Channel Width:	0.15
4 yds	0.15	10 yds	0.05	4 yds	0.05
0.20	0.05	0.13	0.05	0.13	0.05
Transect 4	0.20	Transect 8	0.10		
Substrate:	0.50	Substrate:	0.15	SITE MEDIAN	SITE MAXIMUM
gravel, silt, cobble	0.60	cobble, gravel, silt	0.15	0.20	0.80
Water Clarity:	0.55	Water Clarity:	0.25		
clear	0.40	clear	0.25		
Channel Feature:	0.30	Channel Feature:	0.25		
pool	0.20	pool	0.25		
Channel Width:	0.10	Channel Width:	0.20		
10 yds	0.10	10 yds	0.20		
0.25	0.05	0.20	0.10		

WBID# 1195



Site# 1 Photo ID# 53, Upstream



Site# 1 Photo ID# 54, Downstream



Site# 2 Photo ID# 56, Upstream



Site# 2 Photo ID# 55, Downstream

WBID# 1195



Site# 3 Photo ID# 57, Upstream



Site# 3 Photo ID# 58, Downstream